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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,551	02/17/2004	Taku Kodama	6453P036	3352

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER	
DO, ANH HONG	

ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/781,551	KODAMA ET AL.	
	Examiner	Art Unit	
	ANH H. DO	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-70* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21,30-50 and 59-70* is/are rejected.

7)☒ Claim(s) *22-29 and 51-58* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/24/04 + 8/8/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 59-70 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 59-70 define a computer based structural organization embodying functional descriptive material. However, the claims do not define a computer readable medium or memory and is thus non-statutory for that reason (i.e., "when functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed a computer based structural organization can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The Examiner suggests amending the claims to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 2, 4-10, 30, 31, 33-39, 59 and 60 are rejected under 35 U.S.C. 102(a) as being anticipated by Levien (U.S. Patent No. 5,365,602).

Regarding claim 1, Levien discloses:

- a dividing unit to divide the image code of a compressed image into a plurality of segments (i.e., 17 segments) (col. 4, lines 62-63);

- code size computing unit to compute a code size corresponding to each of the plurality of segments (Fig. 2: steps 18 and 20);

- a memory unit 10 to store the corresponding relation between the code size and each of the plurality of segments (col. 7, lines 16-19).

Regarding claim 9, Levien discloses:

- a code size setting unit to set one or more code sizes (Fig. 2: steps 18 and 20);

- an image quality level computing unit to compute an image quality level matching with the set of one or more code sizes (col. 18, lines 31-35: comparing pixels of the enlarged image to the screen);

- a dividing unit to divide the image code of a compressed image into a plurality of image quality levels (i.e., 17 segments) (col. 4, lines 62-63);

- code size computing unit to compute a code size corresponding to each of the plurality of image quality levels (Fig. 2: steps 18 and 20);

- a memory unit 10 to store the corresponding relation between the code size and each of the plurality of image quality levels (col. 7, lines 16-19).

Regarding claim 30, since this is a method claim corresponding to apparatus claim 1, the discussion of claim 1 is applied hereto.

Regarding claim 38, since this a method claim corresponding to apparatus claim 9, the discussion of claim 9 is applied hereto.

Regarding claim 59, since this claim recites similar subject matters as those in claim 1, the discussion of claim 1 is applied hereto.

Regarding claim 60, since this claim recites similar subject matters as those in claim 9, the discussion of claim 9 is applied hereto.

Regarding claims 2 and 31, Levien teaches a plurality of image quality levels (col. 4, lines 62-68: 17 segments, each generates 16 output pixels corresponding to the image quality).

Regarding claims 4, 5, 33 and 34, Levien teaches dividing the image data based on a code block (col. 6, lines 5-6).

Regarding claims 6-8 and 35-37, Levien teaches color segments (col. 2, lines 27-29) and resolutions and packets (col. 6, lines 25-28).

Regarding claims 10 and 39, Levien teaches setting code size based on process speed of an image display apparatus (col. 2, lines 49-56: the screening process run faster with customized program code size).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 3 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levien (U.S. Patent No. 5,365,602) in view of Cooper (U.S. Patent No. 6,359,548).

Levien teaches the apparatus of claim 1.

Levien does not disclose expressly the quality level is a layer.

Cooper teaches the quality level is a layer (Fig. 3).

Levien & Cooper are combinable because they are from image compression.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to employ the layers in Levien as taught by Cooper.

The suggestion/motivation for doing so would have been to improve compression performance (Cooper, col. 2, lines 19-21).

Therefore, it would have been obvious to combine Levien with Cooper to obtain the invention as specified in claims 3 and 32.

7. Claims 11, 12, 14-20, 40, 41, 43-49, 61 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levien (U.S. Patent No. 5,365,602) in view of Alvarez, II et al. (U.S. Patent No. 7,129,860).

Regarding claim 11, Levien discloses:

- a dividing unit to divide code data of a compressed image into a plurality of segments (i.e., 17 segments) (col. 4, lines 62-63);

- code size computing unit to compute a code size corresponding to each of the

plurality of segments (Fig. 2: steps 18 and 20).

Levien does not disclose expressly an embedding unit to embed the corresponding relation between the reference value and the code size into the generated code.

Alvarez discloses embedding unit to embed the corresponding relation between the reference value and the code size into the generated code (col. 49, lines 49-51).

Levien & Alvarez are combinable because they are from image compression.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to employ embedding unit taught by Alvarez in Levien.

The suggestion/motivation for doing so would have been to improve compression performance by reducing the bandwidth (Alvarez, col. 2, lines 19-24).

Therefore, it would have been obvious to combine Levien with Alvarez to obtain the invention as specified in claim 11.

Regarding claim 61, since this claim recites similar subject matters as those in claim 11, the discussion of claim 11 is applied hereto.

Regarding claim 19, Levien discloses:

- a code size setting unit to set one or more code sizes (Fig. 2: steps 18 and 20);

- an image quality level computing unit to compute an image quality level matching with the set of one or more code sizes (col. 18, lines 31-35: comparing pixels of the enlarged image to the screen);

- a dividing unit to divide the image code of a compressed image into a plurality of image quality levels (i.e., 17 segments) (col. 4, lines 62-63);

- code size computing unit to compute a code size corresponding to each of the plurality of image quality levels (Fig. 2: steps 18 and 20).

Levien does not disclose expressly an embedding unit to embed the corresponding relation between the reference value and the code size into the generated code.

Alvarez discloses embedding unit to embed the corresponding relation between the reference value and the code size into the generated code (col. 49, lines 49-51).

Levien & Alvarez are combinable because they are from image compression.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to employ embedding unit taught by Alvarez in Levien.

The suggestion/motivation for doing so would have been to improve compression performance by reducing the bandwidth (Alvarez, col. 2, lines 19-24).

Therefore, it would have been obvious to combine Levien with Alvarez to obtain the invention as specified in claim 19.

Regarding claim 62, since this claim recites similar subject matters as those in claim 19, the discussion of claim 19 is applied hereto.

Regarding claims 12 and 41, Levien teaches a plurality of image quality levels (col. 4, lines 62-68: 17 segments, each generates 16 output pixels corresponding to the image quality).

Regarding claims 14, 15, 43 and 44, Levien teaches dividing the image data based on a code block (col. 6, lines 5-6).

Regarding claims 16-18 and 45-47, Levien teaches color segments (col. 2, lines 27-29) and resolutions and packets (col. 6, lines 25-28).

Regarding claims 20 and 49, Levien teaches setting code size based on process speed of an image display apparatus (col. 2, lines 49-56: the screening process run faster with customized program code size).

Regarding claim 40, since this is a method claim corresponding to apparatus claim 11, the discussion of claim 11 is applied hereto.

Regarding claim 48, since this is a method claim corresponding to apparatus claim 19, the discussion of claim 19 is applied hereto.

8. Claims 13, 21, 42 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levien (U.S. Patent No. 5,365,602) in view of Alvarez, II et al. (U.S. Patent No. 7,129,860) and further in view of Cooper (U.S. Patent No. 6,359,548).

Levien and Alvarez teach the apparatuses of claims 11, 19, 40 and 48.

Neither Levien nor Alvarez discloses expressly the quality level is a layer.

Cooper teaches the quality level is a layer (Fig. 3).

Levien and Alvarez and Cooper are combinable because they are from image compression.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to employ the layers in Levien and Alvarez as taught by Cooper.

The suggestion/motivation for doing so would have been to improve compression performance (Cooper, col. 2, lines 19-21).

Therefore, it would have been obvious to combine Levien and Alvarez with Cooper to obtain the invention as specified in claims 13, 21, 42 and 50.

Allowable Subject Matter

9. Claims 22-29 and 51-58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding the above claims, the prior art, taken either singly or in combination, does not teach:

- modifying the code data to the desired code size based on the corresponding relation stored in the memory unit; and computing a truncation location matching with the se desired code size based on the corresponding relation stored in the memory unit.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANH H. DO whose telephone number is 571-272-7433. The examiner can normally be reached on 5/4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EILEEN LILLIS can be reached on 571-272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 13, 2007

ANH HONG DO
PRIMARY EXAMINER